

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (previously presented): A CDMA receiver performing a path search by searching with a prescribed timing a delay profile indicating a signal power distribution with respect to delay times of received signals, comprising:

a separating means, which divides said delay profile into a plurality of regions, based on said delay time, and which selects at least one of said regions at the respective timings as a designated object for a signal power detection;

a detection means, which performs a signal power detection within said selected region, and determines a signal power distribution condition;

a priority establishing means, which establishes a priority of a region in response to said signal power distribution condition; and

a region designation means, which designates a region to be selected in said separating means as an object for said signal power detection so that the higher priority a region possessing, with the higher frequency can be designated.

2. (previously presented): The CDMA receiver according to claim 1, wherein said detection means searches for a peak signal power within said selected region, and wherein said

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

region designation means designates a region to be selected so that the higher peak signal power a region possessing, with the higher frequency can be designated.

3. (previously presented): The CDMA receiver according to claim 2, wherein a peak signal power used in determining said designation frequency of said region is a total signal power of a plurality of signal peaks within said region.

4. (canceled).

5. (previously presented): The CDMA receiver according to claim 1, wherein each one of said regions comprises time periods that are either equal to or different from each other.

6. (previously presented): The CDMA receiver according to claim 5, wherein there exists an overlapped time period in each of said region with respect to the neighboring region thereto.

7. (canceled).

8. (previously presented): The CDMA receiver according to claim 19, wherein said classifying means controls regions included among said first region so that, when path information corresponding to a single peak signal power among total signal power within a

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

region is assigned to said finger section, said region is still to be included in said first regions, and when path information corresponding to a total signal power of a plurality of signal peaks within a region is assigned to said finger section, said region is to be excluded from said first region.

9. (previously presented): The CDMA receiver according to claim 3, wherein said total signal power of a plurality of signal peaks within said region is calculated so that a respective different value of multiplier is applied to each peak signal power in order that the higher peak signal power among all of the regions processing, the multiplier of larger value is applied.

10. (previously presented): The CDMA receiver according to claim 3, wherein said total signal power of a plurality of signal peaks within said region is obtained by an average value of peak signal powers detected by one or more searching for said region.

11. (previously presented): The CDMA receiver according to claim 3, wherein said total signal power of a plurality of signal peaks within said region is obtained by weighting a respective different value of weight to each peak signal power in a region in order that the higher designated frequency said region possessing, the weight of higher value is applied.

12. (canceled).

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

13. (currently amended): A method for path searching for a CDMA receiver whereby a path is detected by searching at a prescribed timing for a delay profile indicating a signal power distribution with respect to a delay time of received signal, said method comprising:

dividing said delay profile into a plurality of regions, based on said delay time, and selecting at least one said regions at each of said timings as a designated object for a signal power detection;

searching and detecting a signal power within said selected region, and determining a signal power distribution condition;

establishing a priority of a region in response to said signal power distribution condition; and

designating a region to be selected as an object for detecting said signal power so that the higher priority a region processing possessing, with the higher frequency can be designated.

14. (previously presented): The path search method according to claim 13, whereby a peak signal power within said selected region is detected, and whereby a priority is allocated to said region so that the higher peak signal power a region possessing, at the higher priority can be allocated.

15. (previously presented): The path search method according to claim 14, whereby said priority is calculated based on a peak signal power obtained at each one of said timings, and

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

whereby a frequency for designating said region is calculated based on said priority, and further whereby calculation of said priority and frequency is performed by a prescribed algorithm.

16. (canceled).

17. (canceled).

18. (previously presented): A CDMA receiver comprising:
a delay profile measuring section for measuring a delay profile indicating a signal power distribution with respect to delay time of received signals;
a path search section for searching with a prescribed timing said delay profile;
a rake receiver section; and
a finger section for passing data assigned by said path search section to said rake receiver section;

wherein said path search section includes:

a separating means, which divides said delay profile into a plurality of regions, based on said delay time, and which selects at least one of said regions at the respective timings as a designated object for a peak signal power detection;

a detection means, which performs a peak signal power detection within said selected region, and determines a signal power distribution condition;

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

a priority establishing means, which establishes a priority of a region in response to said peak signal power of said signal power distribution condition; and

a region designation means, which designates a region to be selected in said separating means as an object for said peak signal power detection so that the higher priority a region possessing, with the higher frequency can be designated,

wherein a peak signal power to be detected by said detection means is a total signal power of a plurality of signal peaks within said region.

19. (previously presented): The CDMA receiver according to claim 18, wherein said priority establishing means further having a classifying means, which classifies said regions into first regions including a relatively large peak power distribution and second regions which are other than said first regions, and

wherein said region designation means designates said first regions in a high frequency and said second regions in a low frequency.

20. (previously presented): A computer program for path searching for a CDMA receiver whereby a path is detected by searching at a prescribed timing for a delay profile indicating a signal power distribution with respect to delay time of received signals, said computer program comprising:

AMENDMENT UNDER C.F.R § 1.116
U.S. Application No. 10/043,165
Attorney Docket No. Q68079

dividing said delay profile into a plurality of regions, based on said delay time, and selecting at least one of said regions at each one of said timings as a designated object for a signal power detection;

searching and detecting a signal power within said selected region, and determining a signal power distribution condition;

establishing a priority of a region in response to said signal power distribution condition; and

designating a region to be selected as an object for detecting said signal power so that the higher priority a region possessing, with the higher frequency can be designated.